Method and Apparatus for Optimized Image Processing

Abstract of the Disclosure

An image processing system for digital printing for improving throughput and efficiency of the transfer of image data to imaging devices, such as lasers, while allowing for dynamic and continuous adjustment of image size and registration (i.e., alignment) on recording media. A buffer memory structure is configured to receive data from raw image files. Specific portions of data are copied from the raw image files into a buffer memory structure and, for compilation of the final image, into an image buffer. Image overlap is resolved by copying data into the image buffer according to a defined hierarchy. Using a phase locked loop, image size and registration are adjusted to optimize the appearance of the final image on the recording medium. The optimization is performed dynamically and continuously, thereby providing a uniform final image. Many aspects of the operation of the image processing system may be under the control of a digital computer.